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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/713,887

11/16/2000

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09/28/2009

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EXAMINER

AHLUWALIA, NAVNEET K

ART UNIT

PAPER NUMBER

2166

MAIL DATE

DELIVERY MODE

09/28/2009

PAPER

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* PAUL L. SINCLAIR and ALBERT MAGHBOULEB

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Appeal 2008-005205  
Application 09/713,887  
Technology Center 2100

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Decided: September 26, 2009

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Before LANCE LEONARD BARRY, JEAN R. HOMERE, and STEPHEN  
C. SIU, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

The Patent Examiner rejected claims 1, 3-7, 9-15, 17-21, 23-27, and 30. The Appellants appeal therefrom under 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6(b).

## INVENTION

The invention at issue on appeal is a database management system (DBMS). The DBMS program performs many types of maintenance operations that in traditional DBMS designs, normally place exclusive locks on parts of a database as soon as those operations begin and maintain those locks throughout the operations. In contrast, the Appellants' DBMS uses less severe locks, or no locks at all, when it begins these operations. The system upgrades these locks to exclusive locks when necessary to complete the operations. (Spec. 2.)

## ILLUSTRATIVE CLAIM

30. A method for use in managing data in a database system, comprising:

receiving an instruction from a user to perform a data-definition operation on a set of target data;

placing an initial lock on the target data at a level that prevents at least one but not all types of concurrent operation on the target data;

initiating execution of the operation on the target data;  
and

during the execution of the operation, placing a final lock on the target data at a level that excludes all types of concurrent operations on the target data.

PRIOR ART

Lomet et al. ("Lomet")	5,485,607	Jan. 16, 1996
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REJECTION

Claims 1, 3-7, 9-15, 17-21, 23-27, and 30 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by Lomet.

ISSUE

The Examiner finds that "Lomet teaches the placing of the initial and final locks on the same target data in column 3 lines 46-54 and column 4 through 5 lines 64 through 15 and column 5 lines 35-48." (Ans. 6.) The Appellants argue that "Lomet's locks are placed on two different sets of data and not the same target data required by Applicant." (App. Br. 5.) Therefore, the issue before us is whether the Appellants have shown error in the Examiner's finding that Lomet places an initial lock and a final lock on the same data.

LAW

"It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim, and that anticipation is a fact question . . . ." *In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) (citing *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1457 (Fed. Cir. 1984)).

### FINDINGS OF FACT (FFs)

1. The first part of Lomet cited by the Examiner follows in pertinent part. "[I]f a transaction performed by such a routine includes an access to a certain resource, it will also request that the lock manager post a lock in the lock table identifying the designated resource as one to which access is restricted." (Col. 3, ll. 47-50.)

2. The second part of the reference cited by the Examiner follows in pertinent part.

We digress at this point to note that locking a key value or range thereof is not the same as locking the record or records that the key value or range designates. The record identified by the name-attribute value John Doe may be the same as that identified by the social-security-number-attribute value 123 45 6789. But the key-value locking performed by an operation that uses John Doe as its key value and derives the resource ID from that value when it acquires a lock on it does not by itself restrict access to that record by an operation that requests a lock on the social-security number. Typically, of course, the operation will also perform further locking, such as record-ID locking, which will cause access to that record from other paths to be restricted. Indeed, one of the keys may in essence be the record ID.  
(Col. 4, l. 64 – col. 5, l. 10.)

3. The last part of Lomet cited by the Examiner follows in pertinent part.

Database systems that employ range locking often obtain additional concurrency by means of "multi-granularity locking," or MGL, which conventionally employs five lock modes, as FIGS. 3, 4, and 5 illustrate. FIG. 3 is a lock-mode table, which indicates the types of locks acquired by

transactions in accordance with one application of the MGL scheme for the different types of database-access operations of which they may be comprised. In addition to the simple "covering" lock modes S and X, there are three "intention" lock modes, designated IS, IX, and SIX, whose purpose is to indicate, with respect to a key range, that a further, covering lock will be acquired on a key value that falls within that range. (Col. 5, ll. 35-47.)

### ANALYSIS

The Examiner cites the three aforementioned parts of Lomet as allegedly disclosing the placement of an initial lock and a final lock on the same data. The first part, however, merely describes posting a single lock. (FF 1.)

The second part does disclose placing an initial lock followed by a further lock. (FF 2.) The two locks, however, are not placed on the same data. To the contrary, the initial lock is placed on a key value, while the further lock is placed on the associated record. (*Id.*) Lomet emphasizes the data are different by "not[ing] that locking a key value or range thereof is not the same as locking the record or records that the key value or range designates." (*Id.*)

The third and last part of the reference does disclose placing an intention lock followed by a covering lock. (FF 3.) The two locks, however, are not placed on the same data. To the contrary, we agree with the Appellants that "Lomet teaches that the first lock is placed on a range of

key values and that the second lock is placed on a single key value." (App. Br. 5.)

### CONCLUSION

Based on the aforementioned facts and analysis, we conclude that the Appellants have shown error in the Examiner's finding that Lomet places an initial lock and a final lock on the same data.

### DECISION

We reverse the rejection of claims 1, 3-7, 9-15, 17-21, 23-27, and 30.

### REVERSED

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